At Mar. 31, 1958, these telegraph and telephone services comprised 788.5 miles of pole line, 1,822.9 miles of open wire, 52 miles of aerial cable, 63.25 miles of submarine cable and seven radio stations. Telephone service was provided for 1,670 subscribers of whom 436 were served through lines connected to other company exchanges. There were 24,912 telegrams handled by this service in 1957-58, with operating expenses at $313,489 and net revenues of $66,272.

The Northwest Communication System formerly operated for the Government by Canadian National Telegraphs was fully entrusted to the latter for custody, management and operation effective Apr. 1, 1958. During the year ended Mar. 31, 1958, the system, which provides commercial telephone and telegraph services at airports, settlements and communities in northwest Canada, operated at a profit with revenues amounting to $2,893,335 and expenditures totalling $2,024,145.

Subsection 4.—Federal Government Meteorological Communications

Weather stations operated by the Meteorological Branch of the Department of Transport throughout Canada are linked coast-to-coast by means of teletype and in the remote northern areas by radio or radioteletype. The landline circuits are leased from commercial companies but some of the radio circuits are operated by the Federal Government.

Weather stations on the teletype network transmit their reports directly; other stations report *via* commercial facilities to the nearest station on the teletype line for transmission on the meteorological circuit. The reports are collected on a regional basis and then relayed to other parts of the country as required. There are two coast-to-coast half-duplex systems transmitting weather information, with main relay points at Vancouver, Edmonton, Winnipeg, Toronto, Montreal, Moncton, Halifax, Gander and Goose Bay. These main meteorological communication centres not only handle the distribution of weather information from Canada including the Arctic, but also effect international exchange with the United States and Europe and, through them, with all parts of the hemisphere. For the latter purpose, the Canadian Meteorological Branch and the British Meteorological Office share the cost of a leased duplex circuit in the transatlantic cable. Altogether, the Meterological Branch uses over 39,000 miles of teletype circuits connecting 310 teletype offices.

In addition, facsimile is used to connect forecast offices in all parts of the country including radio facsimile to Arctic stations and ships at sea. This mode of communication permits certain functions of the forecast offices to be carried out at one central location and the processed data, in the form of weather maps, are then distributed throughout the country. The Canadian weather facsimile system is the only fully automatic system in the world. Chart transmissions from the Central Analysis Office in Montreal are made simultaneously to all parts of Canada. The equipment operates at 120 revolutions per minute, permitting a chart 22 x 18 inches to be transmitted in 18 minutes, with automatic sequential operation of the transmitter permitting charts of longer dimension. Altogether, the Meteorological Branch utilizes 14,000 miles of facsimile circuits, serving 64 forecast offices.

Subsection 5.—Federal Government Radio Communication Services

Radio in Canada traces its origin to the year 1900 when wireless telegraphy was introduced and placed under the jurisdiction of the Department of Public Works. The first commercial radio circuit was established between Chateau Bay, Que., and Belle Isle in the Strait of Belle Isle in 1901, replacing an underwater cable which was difficult to maintain. In the first days of radio there did not appear to be any necessity for special legislative control, but the growth of this new medium of communication was very rapid and the Wireless Telegraph Act of 1905 became the first legislation in Canada controlling radio communication.